## SEQUENCE LISTING

<110> ZENECA Limited

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Francois, Isabelle EJA

Evans, Ian J

De Bolle, Miguel FC

Ray, John A

<120> Genetic Method

<130> PPD 50348/WO

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<150> GB 9818001.1

<151> 1998-08-18

<150> GB 9826753.7

<151> 1998-12-04

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<170> PatentIn Ver. 2.1

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	1				5					10					5	
gt	g ct	c go	c at	c to	a g	gtta	tcaa	at d	ttta	gtto	a tt	tatt	gaat	atg	atagt	at 104
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tt	atat	tctt	tta	tggt	ttt	atgt	gttc	tg a	caag	ttgc	a aa	tatt	gagt	ag a	at at	c 161
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Ala	a Ser	· Va	l Se	r Gl	y Gl	u Let	2 Cys	s Gl	u Ly	s Ala	a Se	r Ly	s Thr	Trp	Ser	
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gga	aac	tgi	gg	aat	acq	g gga	cat	tg	t gad	aac	caa	a tgt	aaa	tca	tgg	257
Gly	Asn	Су	Gl3	/ Asr	Thi	Gly	His	Cy	s Ası	Asr	Glr	n Cys	Lys	Ser	Trp	
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Glu	Gly	Ala	Ala	His	Gly	Ala	Cys	His	. Val	Arg	Asn	Gly	Lys	His	Met	
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Cys	Phe	Cys	Tyr	Phe	Asn	Cys	Lys	Lys	Ala	Glu	Lys	Leu	Ala	Gln	Asp	
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Lys	Leu		Ala	Glu	Gln	Leu	Ala	Gln	Asp	Lys	Leu	Asn	Ala	Gln	Lys	
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<213> Dahlia merckii

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Val Leu Ala Ile Ser Asp Ile Ala Ser Val Ser Gly Glu Leu Cys Glu
20 25 30

Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr Gly His Cys
35 40 45

Asp Asn Gln Cys Lys Ser Trp Glu Gly Ala Ala His Gly Ala Cys His
50 55 60

Val Arg Asn Gly Lys His Met Cys Phe Cys Tyr Phe Asn Cys Lys Lys
65 70 75 80

Ala Glu Lys Leu Ala Gln Asp Lys Leu Lys Ala Glu Gln Leu Ala Gln 85 90 95

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Val Val Pro Asn Val Glu His Pro 35 40

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1 5 10 15

Ala Gln Asp Lys Leu Asn Ala Gln Lys Leu Asp Arg Asp Ala Lys Lys
20 25 30

Val Val Pro Asn Val Glu His Pro Ile Gly Lys Arg
35 40

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Ile Gly Lys Arg

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<213> Amaranthus caudatus

<400> 8

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1 5 10 15

Ala Lys Asn Pro Thr Asp Ala Lys Leu Ala Gly Ala Gly Ser Pro
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Le	u Il	e Le	eu P	he	Val	Le	a Ala	a Il	e Se	r As	p Il	e Ala	a Sei	. Va	l Se	r Gly	·
		1	15					20	)				25	5			
ga	a ct	a to	jc g	ag	aaa	gct	ago	aaq	acq	g tg	g to	g ggd	aac	: tg	t gg	c aác	207
Gl	u Le	u Cy	s G	lu	Lys	Ala	Ser	Lys	Thr	Tr	p Se	r Gly	Asn	Су	s Gl	y Asn	
	3	0					35	;				40	)				
										•		g gag					255
		y Hi	s C	/s i	Asp	Asn	Gln	Cys	Lys	Ser	Tr	Glu	Gly	Ala	Ala	His	
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GIY	Ale	ı cy:	s Hl	.s v		Arg	Asn	GIY	Lys			Cys	Phe	Cys	Tyr	Phe	
					65					70					75		
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	<b>V</b> <sub>1</sub> 2		s			nia.	nsp	GIU	85	via	Int	PIO	GIU		vaı	Glu	
				•			-		0,5					90			
cca	gga	cac	, aa	g t	ta	tac	caa	agg	cca	agt	ggg	aca	taa	tca	aa s	at c	399
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		95				•		100		-	3		105		017	741	
tgt	gga	aac	aat	aa	ac e	gca	tgc	aag	aat	cag	tgc	att	aga	ctt	gag	aaa	447
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	110						115					120					
gca	cga	cat	gga	to	t t	gc	aac	tat	gtc	ttc	cca	gct	cac	aag	tgt	atc	495
Ala	Arg	His	Gly	S€	er C	Cys .	Asn '	Tyr	Val	Phe	Pro	Ala	His :	Lys	Cys	Ile	
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<213> Artificial Sequence

<223> Description of Artificial Sequence: Synthetic sequence

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Val Leu Ala Ile Ser Asp Ile Ala Ser Val Ser Gly Glu Leu Cys Glu 20 25 30

Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr Gly His Cys
35 40 45

Asp Asn Gln Cys Lys Ser Trp Glu Gly Ala Ala His Gly Ala Cys His
50 55 60

Val Arg Asn Gly Lys His Met Cys Phe Cys Tyr Phe Asn Cys Ser Asn 65 70 75 80

Ala Ala Asp Glu Val Ala Thr Pro Glu Asp Val Glu Pro Gly Gln Lys
85 90 95

Leu Cys Gln Arg Pro Ser Gly Thr Trp Ser Gly Val Cys Gly Asn Asn 100 105 110

Asn Ala Cys Lys Asn Gln Cys Ile Arg Leu Glu Lys Ala Arg His Gly
115 120 125

Ser Cys Asn Tyr Val Phe Pro Ala His Lys Cys Ile Cys Tyr Phe Pro 130 135 140

Cys

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Gln	Leu	Ile	Gly	Lys	Arg	Gln	Lys	Leu	Cys	Gln	Arg	Pro	Ser	Gly	Thr	
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Trp	Ser	Gly	Val	Cys	Gly	Asn	Asn	Asn	Ala	Cys	Lys	Asn	Gln	Cys	Ile	
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Arg	Leu	Glu	Lys	Ala	Arg	His	Gly	Ser	Cys	Asn	Tyr	Val	Phe	Pro	Ala	
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Met Val Asn Arg Ser Val Ala Phe Ser Ala Phe Val Leu Ile Leu Phe 1 5 10 15

<223> Description of Artificial Sequence: Synthetic

Val Leu Ala Ile Ser Asp Ile Ala Ser Val Ser Gly Glu Leu Cys Glu 20 25 30

Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr Gly His Cys 35 40 45

Asp Asn Gln Cys Lys Ser Trp Glu Gly Ala Ala His Gly Ala Cys His
50 55 60

Val Arg Asn Gly Lys His Met Cys Phe Cys Tyr Phe Asn Cys Lys Lys 65 70 75 80

Ala Glu Lys Leu Ala Gln Asp Lys Leu Lys Ala Glu Gln Leu Ile Gly 85 90 95

Lys Arg Gln Lys Leu Cys Gln Arg Pro Ser Gly Thr Trp Ser Gly Val

Cys Gly Asn Asn Asn Ala Cys Lys Asn Gln Cys Ile Arg Leu Glu Lys
115 120 125

Ala Arg His Gly Ser Cys Asn Tyr Val Phe Pro Ala His Lys Cys Ile 130 135 140

Cys Tyr Phe Pro Cys 145

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<213> Artificial Sequence

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                  Met Val Asn Arg Ser Val Ala Phe Ser Ala Phe Val
                    1
                                                       10
ctg atc ctt ttc gtg ctc gcc atc tca gat atc gca tcc gtt agt gga
Leu Ile Leu Phe Val Leu Ala Ile Ser Asp Ile Ala Ser Val Ser Gly
         15
                              20
                                                  25
gaa cta tgc gag aaa gct agc aag acg tgg tcg ggc aac tgt ggc aac
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Glu Leu Cys Glu Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn
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Cys

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Thr	Gl	у Ні	is C	ys A	sp A	sn G	ln Cy	ys Ly	ys Se	er Tr	p Gl	u Gl	y Al	a Al	a His	
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gga	gc	g tç	t ca	at gt	g c	gt aa	ac gģ	g aa	ıa ca	c at	g tg	t tt	c ta	t ta	c ttc	303
															r Phe	
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														, ,	,	
aat	tg	t aa	a aa	a gc	c qa	a aa	a ct	t ac	t ca	a ga	c aaa	a cti			gaa	251
															Glu	351
	-	•	8			,	<b>5 D</b> C	8		n naj	b ras	s re			i Glu	
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caa	cto	: ac	t ca	a .ca.	<b>.</b>	a at										
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GIII	Dec	99		n AS	ь гу	s Lei			a Glr	1 Lys	Leu	Asp	Arg	Asp	Ala	
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															aag	447
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											Ile					391
	-		160					165	_1_	J, 5		~y3	170	FIIE	FIO	
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Va	l I.e	u Al	a Tl	<b>-</b> 2 -	r Ac.	n T1	~ 71	- 0-			_,				
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Lys	Ala	a Se	r Ly	s Thi	Tr	Se:	r Gl	y As	n Cv:	s Glv	/ Ası	ገ ሞክተ	· Glv	Hic	Cys
		3!					4(					45		1113	Cys
Asp	Asr	Glr	Cys	Lys	Ser	Trp	Glu	ı Gly	/ Ala	a Ala	His	Gly	Ala	Cys	His
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Asp	Lys	Leu	Asn	Ala	Gln	T.ve	Leu	Aen	N ~~	7.00	<b>3</b> 1	•	Lys		
_	-		100			-,0	Deu	105	Arg	nsp	AIA	rys		val	vai
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Asn Gln Cys Ile Arg Leu Glu Lys Ala Arg His Gly Ser Cys Asn Tyr 145 Val Phe Pro Ala His Lys Cys Ile Cys Tyr Phe Pro Cys 165 170

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<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic sequence

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<222> (76)..(525)

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Met Val Asn Arg Ser Val Ala Phe Ser Ala Phe Val

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ctg atc ctt ttc gtg ctc gcc atc tca gat atc gca tcc gtt agt gga 159
Leu Ile Leu Phe Val Leu Ala Ile Ser Asp Ile Ala Ser Val Ser Gly
15 20 25

gaa cta tgc gag aaa gct agc aag acg tgg tcg ggc aac tgt ggc aac 207 Glu Leu Cys Glu Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn 30 35 40

acg gga cat tgt gac aac caa tgt aaa tca tgg gag ggt gcg gcc cat 255

Thr Gly His Cys Asp Asn Gln Cys Lys Ser Trp Glu Gly Ala Ala His

45 50 55 60

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G1	y Al	а Су	s Hi	s Va	l Ar	g As	n Gl	y Ly	s Hi	s Met	t Cys	s Phe	Cys	ту:	Phe	
				6	5				70	ס				75	5	
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Ası	n Cy:	s Ala	a Se	r Th	r Th	r Val	l Ası	p His	Glr	Ala	Asp	Val	Ala	Ala	Thr	
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Lys	Thr	Ile	Gly	Lys	s Arg	Gln	Lys	Leu	Cys	Gln	Arg	Pro	Ser	Gly	Thr	
		95					100	)				105				
								aac								447
Trp		Gly	Val	Cys	Gly	Asn	Asn	Asn	Ala	Cys	Lys	Asn	Gln	Cys	Ile	
	110					115					120					
															•	
								tct								495
	Leu	Glu	Lys	Ala	Arg	His	Gly	Ser	Cys	Asn	Tyr	Val	Phe	Pro	Ala	
125					130					135					140	
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His	Lys	Cys	Ile		Tyr	Phe	Pro	Cys								
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<210> 18

<211> 149

<212> PRT

<213> Artificial Sequence

<223> Description of Artificial Sequence: Synthetic sequence

<400> 18

Met Val Asn Arg Ser Val Ala Phe Ser Ala Phe Val Leu Ile Leu Phe 1 5 10 15

Val Leu Ala Ile Ser Asp Ile Ala Ser Val Ser Gly Glu Leu Cys Glu 20 25 30

Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr Gly His Cys
35 40 45

Asp Asn Gln Cys Lys Ser Trp Glu Gly Ala Ala His Gly Ala Cys His
50 55 60

Val Arg Asn Gly Lys His Met Cys Phe Cys Tyr Phe Asn Cys Ala Ser
65 70 75 80

Thr Thr Val Asp His Gln Ala Asp Val Ala Ala Thr Lys Thr Ile Gly
85 90 95

Lys Arg Gln Lys Leu Cys Gln Arg Pro Ser Gly Thr Trp Ser Gly Val

Cys Gly Asn Asn Asn Ala Cys Lys Asn Gln Cys Ile Arg Leu Glu Lys
115 120 125

Ala Arg His Gly Ser Cys Asn Tyr Val Phe Pro Ala His Lys Cys Ile 130 135 140

Cys Tyr Phe Pro Cys

<210> 19

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<222> (76)..(312)

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Met Val Asn Arg Ser Val Ala Phe Ser Ala Phe Val	
1 5 10	
_·	
ctg atc ctt ttc gtg ctc gcc atc tca gat atc gca tcc gtt agt gga	159
Leu Ile Leu Phe Val Leu Ala Ile Ser Asp Ile Ala Ser Val Ser Gly	133
15 20 25	
gaa cta tgc gag aaa gct agc aag acg tgg tcg ggc aac tgt ggc aac	207
Glu Leu Cys Glu Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn	207
30 35 40	
acg gga cat tgt gac aac caa tgt aaa tca tgg gag ggt gcg gcc cat	255
Thr Gly His Cys Asp Asn Gln Cys Lys Ser Trp Glu Gly Ala Ala His	233
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Gly Ala Cys His Val Arg Asn Gly Lys His Met Cys Phe Cys Tyr Phe	303
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212> PRT	
213> Artificial Sequence	
223> Description of Artificial Sequence: Synthetic	
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Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr Gly His Cys
35 40 45

Asp Asn Gln Cys Lys Ser Trp Glu Gly Ala Ala His Gly Ala Cys His
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Val Arg Asn Gly Lys His Met Cys Phe Cys Tyr Phe Asn Cys 65 70 75

<210> 21

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<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Linker
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<400> 21

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<210> 22

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<212> PRT

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<223> Description of Artificial Sequence: Linker peptide

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<400> 22
Ser Asn Ala Ala Asp Glu Val Ala Thr Pro Glu Asp
1 5 10
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<211> 11
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<223> Description of Artificial Sequence: Linker

<400> 23
Ser Asn Ala Ala Asp Glu Val Ala Thr Pro Glu
1 5 10

<210> 24 <211> 28 <212> PRT <213> Artificial Sequence

peptide

<220>
<223> Description of Artificial Sequence: Linker peptide

Leu Ala Gln Glu Glu Ala Pro Val Tyr Ser Glu Asp 20 25

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<210> 25
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<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Linker propeptide

<400> 25

Lys Lys Ala Glu Lys Leu Ala Gln Asp Lys Leu Lys Ala Glu Gln Leu

1 5 10 15

Ile Gly Lys Arg Ile Gly Lys Arg Ile Gly Lys Arg
20 25

<210> 26

<211> 52

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Linker propeptide

<400> 26

Lys Lys Ala Glu Lys Leu Ala Gln Asp Lys Leu Lys Ala Glu Gln Leu

1 5 10 15

Ala Gln Asp Lys Leu Asn Ala Gln Lys Leu Asp Arg Asp Ala Lys Lys
20 25 30

Val Val Pro Asn Val Glu His Pro Ile Gly Lys Arg Ile Gly Lys Arg
35 40 45

Ile Gly Lys Arg

15

10

25

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WO 00/11175
<210> 27
<211> 28
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Linker
      propeptide
<400> 27
Ala Ser Thr Thr Val Asp His Gln Ala Asp Val Ala Ala Thr Lys Thr
Ile Gly Lys Arg Ile Gly Lys Arg Ile Gly Lys Arg
            20
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<210> 28 <211> 29 <212> PRT <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Linker propeptide

<400> 28

Ser Asn Ala Ala Asp Glu Val Ala Thr Gln Leu Leu Asn Phe Asp Leu 1 5 10 15

Leu Lys Leu Ala Gly Asp Val Glu Ser Asn Pro Gly Pro 20 25

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<210> 29
  <211> 15
  <212> PRT
  <213> Artificial Sequence
  <220>
 <223> Description of Artificial Sequence: Linker peptide
 <400> 29
 Asn Ala Ala Asp Glu Val Ala Thr Pro Glu Asp Val Glu Pro Gly
                                                            15
 <210> 30
 <211> 446
 <212> DNA
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 <220>
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       sequence
<220>
<221> CDS
<222> (3)..(437)
<400> 30
cc atg gtg aat cgg tcg gtt gcg ttc tcc gcg ttc gtt ctg atc ctt
                                                                    47
   Met Val Asn Arg Ser Val Ala Phe Ser Ala Phe Val Leu Ile Leu
     1
                     5
                                         10
                                                             15
ttc gtg ctc gcc atc tca gat atc gca tcc gtt agt gga gaa cta tgc
                                                                   95
Phe Val Leu Ala Ile Ser Asp Ile Ala Ser Val Ser Gly Glu Leu Cys
                 20
                                                          30
```

gag aaa gct agc aag acg tgg tcg ggc aac tgt ggc aac acg gga cat Glu Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr Gly His

tg	t ga	c a	ac	caa	a tg	t aa	a tc	a tg	g ga	g gg	t gc	g gc	t ca	c gg	a go	g tg	191
																a Cys	
			50					5					6				
cat	gt	g c	gt	aac	gg	g aa	a ca	c ato	g tg	t tt	c tgi	t tac	tto	c aa	t tg	t aac	239
																s Asn	
	6						70					75			_		
gcg	gco	g ga	ic (	gag	gtg	gct	acc	cca	gaç	gad	gtg	gaa	cct	ggt	cac	g aag	287
Ala	Ala	a As	p (	Glu	Val	Ala	Thr	Pro	Glu	Asp	Val	Glu	Pro	Gly	, Glr	Lys	
80						85					90					95	
ttg	tgc	ca	a a	agg	cca	agt	cgt	aca	tgg	tca	gga	gtc	tgt	gga	aac	aat	335
																Asn	
					100					105			•	•	110		
aac	gca	tg	e a	ag	aat	cag	tgc	att	aga	ctt	gag	aaa	gca	cga	cat	gga	383
								Ile									-
				15					120					125		1	
tct	tgc	aac	: ta	at d	egt	ttc	cca	gct	cac	aag	tgt	atc	tgc	tac	ttt	cct	431
								Ala									
		130						135					140	-			
tgt :	taa	tag	gag	gcto	:												446
Cys																	
<210>	> 31																
<211>	14	4															
<212>	PR	r															
<213>	Art	ifi	cia	al s	Sequ	ence	•										

<400> 31

Met Val Asn Arg Ser Val Ala Phe Ser Ala Phe Val Leu Ile Leu Phe

<223> Description of Artificial Sequence: Synthetic

1 5

sequençe

Val Leu Ala Ile Ser Asp Ile Ala Ser Val Ser Gly Glu Leu Cys Glu
20 25 30

Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr Gly His Cys
35 40 45

Asp Asn Gln Cys Lys Ser Trp Glu Gly Ala Ala His Gly Ala Cys His
50 55 60

Val Arg Asn Gly Lys His Met Cys Phe Cys Tyr Phe Asn Cys Asn Ala 65 70 75 80

Ala Asp Glu Val Ala Thr Pro Glu Asp Val Glu Pro Gly Gln Lys Leu 85 90 95

Cys Gln Arg Pro Ser Arg Thr Trp Ser Gly Val Cys Gly Asn Asn Asn 100 105 110

Ala Cys Lys Asn Gln Cys Ile Arg Leu Glu Lys Ala Arg His Gly Ser 115 120 125

Cys Asn Tyr Arg Phe Pro Ala His Lys Cys Ile Cys Tyr Phe Pro Cys 130 135 140

<210> 32

<211> 443

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic sequence

<220>

<221> CDS

<222> (3)..(434)

<	400>	32														
C	c at	g gt	g aa	t cg	g to	g gt	t go	g tt	c to	c go	g tt	c gt	t ct	g at	c ctt	47
															e Leu	
		1				5					0				15	
														4		
tt	c g	tg c	tc g	cc a	tc t	ca g	at a	tc g	ca t	cc g	tt a	gt gg	ga ga	a ct	a tgo	95
															eu Cys	
				:	20					25				3	0	
															a cat	143
Gl	u Ly	s Al	a Se	er L	s Ti	r T	cp Se	er G	ly As	sn C	/s Gl	y As	n Th	r Gl	y His	
			3	35				4	10				4	5		
															g tgt	191
Су	s As			n Cy	s Ly	s Se	r Tr	p Gl	u Gl	y Al	a Al	a Hi	s Gl	y Al	a Cys	
		5	U				5	5				60	)			
<b>C</b> 3 1		~ ~~	<b>.</b>													
															tee	239
1112	6:		y no	n GI	у гу			с су	s Ph	е Су			e Asr	Cys	s Ser	
	Ο.	•				7	J				79	5				
aac	aco	a acc	c dad	: gad	ato		- 200		. ~ .	~ ~						
															ttg Leu	287
80			1		85				9 610	90		. GIU	GIN	Lys		
										,	,				95	
tgc	caa	agg	cca	agt	cat	aca	taa	tca	gga	ato	tat	gga	220	22+	222	225
												Gly				335
				100	_		-		105		-1-	1		110	vell	
														110		
gca	tgc	aag	aat	cag	tgc	att	aga	ctt	gag	aaa	qca	cga	cat	gga	tict	383
												Arg				303
			115					120				-	125	-		
tgc	aac	tat	cgt	ttc	cca	gct	cac	aag	tgt	atc	tgc	tac	ttt	cct	tgt	431
												Tyr				
		130					135					140			-	

<210> 33

<211> 143

<212> PRT

<213> Artificial Sequence

<223> Description of Artificial Sequence: Synthetic sequence

<400> 33

Met Val Asn Arg Ser Val Ala Phe Ser Ala Phe Val Leu Ile Leu Phe

1 5 10 15

Val Leu Ala Ile Ser Asp Ile Ala Ser Val Ser Gly Glu Leu Cys Glu
20 25 30

Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr Gly His Cys
35 40 45

Asp Asn Gln Cys Lys Ser Trp Glu Gly Ala Ala His Gly Ala Cys His 50 55 60

Val Arg Asn Gly Lys His Met Cys Phe Cys Tyr Phe Asn Cys Ser Asn 65 70 75 80

Ala Ala Asp Glu Val Ala Thr Pro Glu Asp Val Glu Gln Lys Leu Cys
85 90 95

Gln Arg Pro Ser Arg Thr Trp Ser Gly Val Cys Gly Asn Asn Asn Ala

Cys Lys Asn Gln Cys Ile Arg Leu Glu Lys Ala Arg His Gly Ser Cys 115 120 125

Asn Tyr Arg Phe Pro Ala His Lys Cys Ile Cys Tyr Phe Pro Cys 130 135 140

<2	10>	34														
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<2	13>	Arti	fici	al S	eque	nce										
<22	20>															
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		sequ	ence													
<22	20>															
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<22	2>	(3).	. (428	3)												
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cc	atg	gtg	aat	cgg	tcg	gtt	gcg	ttc	tcc	gcg	ttc	gtt	ctg	atc	ctt	47
	Met	Val	Asn	Arg	Ser	Val	Ala	Phe	Ser	Ala	Phe	Val	Leu	Ile	Leu	
	1				5					10					15	
ttc	gto	g ctc	gcc	ato	tca	gat	atc	gca	tcc	gtt	agt	gga	gaa	cta	tgc	95
Phe	Va)	Leu	Ala	Ile	Ser	Asp	Ile	Ala	Ser	Val	Ser	Gly	Glu	Leu	Cys	
				20					25					30		
gag	aaa	gct	agc	aag	acg	tgg	tcg	ggc	aac	tgt	ggc	aac	acg	gga	cat	143
Glu	Lys	: Ala	Ser	Lys	Thr	Trp	Ser	Gly	Asn	Cys	Gly	Asn	Thr	Gly	His	
			35					40					45			
tgt	gac	aac	caa	tgt	aaa	tca	tgg	gag	ggt	gcg	gct	cac	gga	gcg	tgt	191
Cys	Asp	Asn	Gln	Cys	Lys	Ser	Trp	Glu	Gly	Ala	Ala	His	Gly	Ala	Cys	
		50					55					60				
cat	gtg	cgt	aac	ggg	aaa	cac	atg	tgt	ttc	tgt	tac	ttc	aat	tgt	tcc	239
lis	Val	Arg	Asn	Gly	Lys	His	Met	Cys	Phe	Cys	Tyr	Phe	Asn	Cys	Ser	
	65					70					75					
ac	gcg	gcc	gac	gag	gtg	gct	acc	cca	gag	gac	cag	aag	ttg	tgc	caa	287
		Ala														
80					85					90					95	

ag	g cc	aaq	gt c	gt a	ca to	gg t	ca g	ga g	tc t	gt g	ga .	aac	aat	aa	c g	ca	tgc	335
Ar	g Pr	o Se	er Ai	g Tl	nr T	rp Se	er G	ly V	al C	ys G	ly i	Asn	Asr	As	n A	la	Cys	
				10	00				1	05					1:	10		
aa	g aa	t ca	g to	c at	t aç	ga ct	t ga	ag a	aa g	ca c	ga d	cat	gga	tc	t to	gc	aac	383
Ly	s As	n Gl	n Cy	s I)	e Ar	g Le	eu G	lu L	ys A	la A	rg I	His	Gly	Se	r C	/s	Asn	
			11	.5				1:	20					12	5			
ta	t cg	t tt	c cc	a go	t ca	c aa	g to	jt at	ct	gc ta	ac t	tt	cct	tgt	t ta	ıa		428
ту	r Ar	g Ph	e Pr	o Al	a Hi	s Ly	s Cy	s I	le Cy	's Ty	r F	he	Pro	Cys	3			
		13	0				13	5					140					
tag	ggag	ctc																437
	10> 3																	
<21	.1> 1	41							*					,				
	.2> F																	
			icia		-													
<22	3> D	esci	ipti	on o	of Aı	ctifi	.cia	l Se	quen	ce:	Syn	the	tic					
	s	eque	nce															
	0> 3																	
		Asn	Arg			. Ala	Phe	Se	c Ala	a Phe	e Va	al I	Leu	Ile	Leu	a F	he	
1				5					10	)					15	5		
Val	Leu	Ala	Ile		Asp	Ile	Ala	Ser	· Val	. Ser	- G1	Ly G	lu	Leu	Cys	G	lu	•
			20					25	i					30				
Lys	Ala		Lys	Thr	Trp	Ser			Cys	Gly	' As	n T	hr (	Gly	His	C	ys	
		35					40						45					
Asp		Gln	Cys	Lys	Ser		Glu	Gly	Ala	Ala			ly A	Ala	Cys	Н	is	
	50					55					6	0						
	Arg	Asn	Gly	Lys	His	Met	Cys	Phe	Cys	Tyr	Ph	e A	sn (	: Ys	Ser	A	sn	
65					70					75						1	30	

Ala Ala Asp Glu Val Ala Thr Pro Glu Asp Gln Lys Leu Cys Gln Arg

Pro Ser Arg Thr Trp Ser Gly Val Cys Gly Asn Asn Asn Ala Cys Lys

Asn Gln Cys Ile Arg Leu Glu Lys Ala Arg His Gly Ser Cys Asn Tyr 115 120 125

Arg Phe Pro Ala His Lys Cys Ile Cys Tyr Phe Pro Cys 130 135 140

<210> 36

<211> 434

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
sequence

<220>

<221> CDS

<222> (3)..(425)

<400> 36

cc atg gtg aat cgg tcg gtt gcg ttc tcc gcg ttc gtt ctg atc ctt

Met Val Asn Arg Ser Val Ala Phe Ser Ala Phe Val Leu Ile Leu

1 5 10 15

ttc gtg ctc gcc atc tca gat atc gca tcc gtt agt gga gaa cta tgc 95
Phe Val Leu Ala Ile Ser Asp Ile Ala Ser Val Ser Gly Glu Leu Cys
20 25 30

gag aaa gct agc aag acg tgg tcg ggc aac tgt ggc aac acg gga cat 143 Glu Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr Gly His

									31							
tgt	gad	: aac	ca	a tg	t aaa	a tca	a tg	g ga	g ggt	ge	g gct	cac	gga	a gcg	tgt	191
															Cys	
		50					55					60				
cat	gtg	cgt	aac	gg	gaaa	cac	ato	, tgt	tto	tgt	tac	ttc	aat	tgt	tcc	239
His	Val	Arg	Asr	Gly	y Lys	His	Met	Cys	Phe	Cys	туг	Phe	Asn	Cys	Ser	
	65					70					75					
aac	gcg	gcc	gac	gaç	gtg	gct	acc	cca	gag	cag	aag	ttg	tgc	caa	agg	287
Asn	Ala	Ala	Asp	Glu	Val	Ala	Thr	Pro	Glu	Gln	Lys	Leu	Cys	Gln	Arg	
80					85					90					95	
					tca											335
Pro	Ser	Arg	Thr		Ser	Gly	Val	Cys	Gly	Asn	Asn	Asn	Ala	Cys	Lys	
				100					105					110		
					ctt											383
Asn	Gin	Cys		Arg	Leu	Glu	Lys		Arg	His	Gly	Ser	Cys	Asn	Tyr	
			115					120					125			
													taa	tagg	agctc	434
Arg	rne	PTO	ATA	HIS	Lys	Cys	lle	cys	Tyr	Phe	Pro	Cys				

130 135 140

<210> 37

<211> 140

<212> PRT

<213> Artificial Sequence

<223> Description of Artificial Sequence: Synthetic sequence

<400> 37

Met Val Asn Arg Ser Val Ala Phe Ser Ala Phe Val Leu Ile Leu Phe 1 5 15

Val Leu Ala Ile Ser Asp Ile Ala Ser Val Ser Gly Glu Leu Cys Glu

Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr Gly His Cys
35 40 45

Asp Asn Gln Cys Lys Ser Trp Glu Gly Ala Ala His Gly Ala Cys His
50 55 60

Val Arg Asn Gly Lys His Met Cys Phe Cys Tyr Phe Asn Cys Ser Asn 65 70 75 80

Ala Ala Asp Glu Val Ala Thr Pro Glu Gln Lys Leu Cys Gln Arg Pro 85 90 95

Ser Arg Thr Trp Ser Gly Val Cys Gly Asn Asn Asn Ala Cys Lys Asn 100 105 110

Gln Cys Ile Arg Leu Glu Lys Ala Arg His Gly Ser Cys Asn Tyr Arg 115 120 125

Phe Pro Ala His Lys Cys Ile Cys Tyr Phe Pro Cys 130 135 140

<210> 38

<211> 485

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic sequence

<220>

<221> CDS

<222> (3)..(476)

<400> 38

cc atg gtg aat cgg tcg gtt gcg ttc tcc gcg ttc gtt ctg atc ctt 47

Met Val Asn Arg Ser Val Ala Phe Ser Ala Phe Val Leu Ile Leu

1 5 10 15

ttc	gto	g ct	c gc	c at	c tca	a gat	t ato	c gca	tc	gti	t agt	gga	a gaa	a cta	tgc	95
Phe	. Val	Le	u Ala	a Ile	e Sei	. Ası	, Ile	e Ala	Sei	· Vai	l Ser	Gly	/ Glu	ı Leu	Cys	
				20	)				25	5				30	•	
gag	aaa	gct	ago	c aaq	acq	tgc	g te	ggg	aac	tgt:	ggc	aac	acç	g gga	cat	143
Glu	Lys	Ala	a Sei	Lys	Thr	Trp	Ser	Gly	Asr	Cys	Gly	Asn	Thr	Gly	His	
			35	5				40	ı				45	5		
tgt	gac	aac	caa	tgt	aaa	tca	tgg	gag	ggt	gcg	gct	cac	gga	gcg	tgt	191
Cys	Asp	Asr	Glr	Cys	Lys	Ser	Trp	Glu	Gly	Ala	Ala	His	Gly	Ala	Cys	
		50	)				55					60				
cat	gtg	cgt	aac	999	aaa	cac	atg	tgt	ttc	tgt	tac	ttc	aat	tgt	gct	239
His	Val	Arg	Asn	Gly	Lys	His	Met	Cys	Phe	Cys	Tyr	Phe	Asn	Cys	Ala	
	65					70					75					
aac	gct	gag	gaa	gct	gct	gct	gct	att	cct	gaa	gct	tct	gaa	gaa	ctt	287
Asn	Ala	Glu	Glu	Ala	Ala	Ala	Ala	Ile	Pro	Glu	Ala	Ser	Glu	Glu	Leu	
80					85					90					95	
gct	caa	gaa	gaa	gct	cct	gtg	tac	agt	gaa	gat	cag	aag	ttg	tgc	caa	335
Ala	Gln	Glu	Glu	Ala	Pro	Val	Tyr	Ser	Glu	Asp	Gln	Lys	Leu	Cys	Gln	
				100					105					110		
agg	cca	agt	cgt	aca	tgg	tca	gga	gtc	tgt	gga	aac	aat	aac	gca	tgc	383
Arg	Pro	Ser	Arg	Thr	Trp	Ser	Gly	Val	Cys	Gly	Asn	Asn	Asn	Ala	Cys	
			115					120					125			
aag	aat	cag	tgc	att	aga	ctt	gag	aaa	gca	cga	cat	gga	tct	tgc	aac	431
Lys	Asn	Gln	Cys	Ile	Arg	Leu	Glu	Lys	Ala	Arg	His	Gly	Ser	Cys	Asn	
		130					135					140				
tat	cgt	ttc	cca	gct	cac	aag	tgt	atc	tgc	tac	ttt	cct	tgt	taa		476
Tyr	Arg	Phe	Pro	Ala	His	Lys	Cys	Ile	Cys	Tyr	Phe	Pro	Cys			
	145					150					155	•				

<21	.0> :	39													
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	S	seque	ence												
-40	0> 3	20													
			Arc	s Ser	- Val	A 1 =	Phe	Ser	- מו	Dhe	. Val	Leu	Tle	Leu	Ph
1		. no:		, 562		. Ale	. Fire		10		· vai	Lec	116	15	
_				•	,				10					13	
Val	Leu	Ala	Ile	e Ser	Asp	Ile	Ala	Ser	Val	Ser	Gly	Glu	Leu	Cys	Gl
			20	)				25					30		
I.vs	Ala	Ser	Lvs	. Thr	ጥ ግግ	Ser	- Glv	Asn	Cvs	Glv	Aen	Thr	Glv	His	Cvs
_,_		35					40		-7-			45	-		<b>O y</b> .
		55					40					43			
Asp	Asn	Gln	Cys	Lys	Ser	Trp	Glu	Gly	Ala	Ala	His	Gly	Ala	Cys	His
	50					55					60				
17. 1	2	2	C1	T	11: -	Vah	C	Dh.a	0		Dh.a	2	<b>0</b>	21-	<b>3</b>
65	Arg	ASII	GIY	rys	70	met	cys	Pne	Cys	75	Pne	ASN	Cys	Ala	
65					70					75					80
Ala	Glu	Glu	Ala	Ala	Ala	Ala	Ile	Pro	Glu	Ala	Ser	Glu	Glu	Leu	Ala
				85					90					95	
-1	<b>63</b>	<b>a</b> 1		<b>5</b>		_	_	2.1		<b>-</b> \	_	_	_		
GIN	GIU	GIU		Pro	vai	Tyr	Ser		Asp	Gin	Lys	Leu		Gln	Arg
			100					105					110		
Pro	Ser	Arg	Thr	Trp	Ser	Gly	Val	Cys	Gly	Asn	Asn	Asn	Ala	Cys	Lys
		115					120					125			
Asn	Gln	Cys	Ile	Arg	Leu	Glu	Lys	Ala	Arg	His	Gly	Ser	Cys	Asn	Tyr

Arg Phe Pro Ala His Lys Cys Ile Cys Tyr Phe Pro Cys

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	sequence															
	<220\															
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<221> CDS																
<222> (3)(1085)																
	00> 4															
cc						gtt										47
		Val	Asn	Arg		Val	Ala	Phe	Ser	Ala	Phe	Val	Leu	Ile	Leu	
	1				5					10					15	
															tgc	95
Pne	vaı	Leu	ı Ala			Asp	) Ile	. Ala			Ser	Gly	, Glu	Leu	Cys	
				20	)				25					30	)	
aaa		act					•									
						tgg Trp										143
014	2,0		35		1111	Пр	Sel	40		Cys	GIY	ASN		_	HIS	
			33					40					45			
tat	gac	aac	caa	tat	222	tca	taa	aaa	aat	aca	act	636	903	~~~	<b>.</b>	101
						Ser										191
-	•	50			-1		55		1			60	Oly	nia	Cys	
												-				
cat	gtg	cgt	aac	ggg	aaa	cac	ato	tat	ttc	tat	tac	ttc	aac	tac	act	239
						His								-	-	237
	65			-	_	70		•		•	- 75			-,-		
aac	gct	gag	gaa	gct	gct	gct	gct	att	cct	gaa	gct	tct	gaa	gaa	ctt	287
						Ala								-		
80					85					90					95	

g	CE C	aa (	gaa	ga	a go	et c	ct g	tg	tac	ag	jt g	aa q	gat	ca	gaa	g ti	-g	tgc	caa	335
A.	la G	ln (	Glu	Gli	u Al	a P	co V	al	Туг	: Se	r G	lu A	sp	Gli	n Ly	s Le	eu	Cys	Gln	
					10							)5						110		
aç	gg c	ca a	igt	cgt	ac	a to	g t	ca	gga	gt	c to	ıt g	ģa	aac	: aa	t aa	ic (	aca	tgc	383
Ar	g Pi	co S	Ser	Arç	Th	r Tr	p s	er	Gly	Va	1 Cy	's G	ly	Asr	ı Ası	n As	n i	3 Ala	Cys	303
				115						12			-			12			Cys	
																	•			
aa	gaa	it c	ag	tgc	at	t ag	a ci	t (	gag	aaa	a qc	a c	σa	cat	aas	a to	+ +	- 00	220	421
Ly	s As	n G	ln	Cys	Ile	e Ar	g Le	eu (	Glu	Lvs	s Al	a A	ra	Hie	99,	, 80	- c	-yc	aac	431
		1	30						135				- 9		140		1 (	-ys	ASN	
															140	,				
ta	t cg	t t	tc ·	cca	gct	: ca	c aa	a t	tat	ato	: ta	o ta		++0	cat					
Ty	r Ar	g Pi	he :	Pro	Ala	Hi:	s Lv	s	Cvs	Ile	Cv	3 T.	,,,	Dho	משם	. cg		, icg	aat	479
	14	5					15				. 07.	1		155	PIO	Cy:	5 A	ııa	Asn	
														133						
gct	ga.	a ga	aa q	gct	gct	act	ac	t a	t.t.	cet	na:		.+ 4	<b>-</b>						
Ala	a Gl	ı G]	Lu 7	Ala	Ala	Ala	a Al	a T	10	Pro	Gli	ו או		20-	gaa	gaa		tt ·	gct	527
160	)					165				110	GIC	17		ser	Glu	GIU	L			
												1,	U						175	
caa	gaa	a qa	ıa o	ıca	cca	att	+ = 4	~ +.	c+	~	~~+		_							
Gln	Gli	ı Gl	u A	la	Pro	Val	Tu	- 6	o = .	944	yac	ga	c g	gga 	gtg	aag	CI	tc t	gc	575
	Glu				180	• • •	± y .		er ,	GIU		AS	рG	īУ	Val	Lys			Cys	
											185						19	90		
gac	ata	cc	a t	cc	aa s	200	+ ~ ~													
Asp	gtg Val	Pr	0 5	or i	gga clu	Th.	m		30 ¢	gga 	cac	tg	e g	gt	tcc	tcc	аç	jc a	ag	623
	Val	• •		95	GIÀ	1111	ırţ	) SE			His	Cys	∍ G	ly	Ser	Ser	Se	er L	ys	
			-	,,					2	200						205				
tac	200	<b>C</b> 3.																		
Cve	agc	Cl.		aa 1	cge	aag	gac	ag	19 g	jag	cac	ttc	; g	ct 1	tac	gga	gg	a g	ct	671
Суз	Ser	310		Ln (	.ys	гàг	Asp			lu	His	Phe	: A.	la :	lyr	Gly	Gl	у А	la	
		210	,					21	5					2	220					
<b>.</b>																				
tgc	cac	tac	. ca	ia t	tc.	cca	tcc	gt	g a	ag	tgc	ttc	tç	gc a	ag .	agg	ca	a to	gc	719
Cys	HIS	Tyr	Gl	n P	he	Pro	Ser	۷a	l L	ys (	Cys	Phe	Су	s L	ys i	Arg	Gl	n Cy	/s	
	225						230						23	15						

gc	t aa	c go	t ga	ıg ga	a gc	t gct	gc:	t get	t at	t cc	t gaa	gct	: tci	gaa	a gaa	767
															ı Glu	
24					24					250					255	
															233	
ct	t gc	t ca	a ga	a ga	a gct	cct	gtg	g tac	agt	t gaa	a gat	cao	aac	ata	tgc	815
															Cys	013
				26				•	265		<b>F</b>			270		
														2,0		
cca	agg	g gti	t aa	t cg	a att	gtg	aca	ccc	.tgt	gta	qcc	tac	gga	ctc	aaa	863
					g Ile											003
			275					280				-1-	285		017	
agg	gca	cca	ato	gco	cca	tgc	tgc	aga	gcc	ctg	aac	gat	cta	caa	ttt	911
					Pro											
		290					295					300		3		
gtg	aat	act	aga	aac	cta	cga	cgt	gct	gca	tgc	cgc	tgc	ctc	gta	aaa	959
					Leu											
	305					310					315				-	
gta	gtg	aac	cgg	aac	ccc	ggt	ctg	aga	cga	aac	cct	aga	ttt	cag	aac	1007
					Pro											
320					325					330					335	
att	cct	cgt	gat	tgt	cgc	aac	acc	ttt	gtt	cgt	ccc	ttc	tgg	tgg	cgt	1055
Ile	Pro	Arg	Asp	Cys	Arg	Asn '	Thr .	Phe	Val	Arg	Pro :	Phe '	Trp	Trp .	Arg	
				340					345					350		
cca	aga	att	caa	tgc	ggc .	agg a	att a	aac 1	taa	taga	gctc					1093
Pro	Arg	Ile	Gln	Cys	Gly i	Arg ]	le 1	Asn								
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<212	> PR'	r														

<213> Artificial Sequence

<223> Description of Artificial Sequence: Synthetic sequence

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- Val Leu Ala Ile Ser Asp Ile Ala Ser Val Ser Gly Glu Leu Cys Glu 20 25 30
- Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr Gly His Cys
  35 40 45
- Asp Asn Gln Cys Lys Ser Trp Glu Gly Ala Ala His Gly Ala Cys His
  50 55 60
- Val Arg Asn Gly Lys His Met Cys Phe Cys Tyr Phe Asn Cys Ala Asn
  65 70 75 80
- Ala Glu Glu Ala Ala Ala Ile Pro Glu Ala Ser Glu Glu Leu Ala 85 90 95
- Gln Glu Glu Ala Pro Val Tyr Ser Glu Asp Gln Lys Leu Cys Gln Arg 100 105 110
- Pro Ser Arg Thr Trp Ser Gly Val Cys Gly Asn Asn Asn Ala Cys Lys
- Asn Gln Cys Ile Arg Leu Glu Lys Ala Arg His Gly Ser Cys Asn Tyr 130 135 140
- Glu Glu Ala Ala Ala Ile Pro Glu Ala Ser Glu Glu Leu Ala Gln 165 170 175
- Glu Glu Ala Pro Val Tyr Ser Glu Asp Asp Gly Val Lys Leu Cys Asp 180 185 190

Val	Pro	Ser	Gly	Thr	Trp	Ser	Gly	His	Cys	Gly	Ser	Ser	Ser	Lys	Cys
		195					200					205			

- Ser Gln Gln Cys Lys Asp Arg Glu His Phe Ala Tyr Gly Gly Ala Cys 210 215 220
- His Tyr Gln Phe Pro Ser Val Lys Cys Phe Cys Lys Arg Gln Cys Ala 225 230 235 240
- Asn Ala Glu Glu Ala Ala Ala Ile Pro Glu Ala Ser Glu Glu Leu
  245 250 255
- Ala Gln Glu Glu Ala Pro Val Tyr Ser Glu Asp Gln Asn Ile Cys Pro 260 265 270
- Arg Val Asn Arg Ile Val Thr Pro Cys Val Ala Tyr Gly Leu Gly Arg
- Ala Pro Ile Ala Pro Cys Cys Arg Ala Leu Asn Asp Leu Arg Phe Val 290 295 300
- Asn Thr Arg Asn Leu Arg Arg Ala Ala Cys Arg Cys Leu Val Gly Val 305 310 315 320
- Val Asn Arg Asn Pro Gly Leu Arg Arg Asn Pro Arg Phe Gln Asn Ile 325 330 335
- Pro Arg Asp Cys Arg Asn Thr Phe Val Arg Pro Phe Trp Arg Pro 340 345 350
- Arg Ile Gln Cys Gly Arg Ile Asn 355 360

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<2	13>	Arti	fici	al s	eque	nce										
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<2:	21> (	CDS														
<22	22>	(3).	. (47	6)												
	00> 4															
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		Val	Asn	Arg		Val	Ala	Phe	Ser	Ala	Phe	Val	Leu	Ile	Leu	
	1				5					10					15	
															tgc	95
Phe	. Val	. Leu	Ala			Asp	Ile	Ala			. Ser	Gly	Glu		Cys	
				20					25					30		
~~~		ac+	200		200	<b>.</b>										
		gct Ala														143
	בינם		35		1	пр	Ser	40		Cys	Gly	ASII	45	Gry	nıs	
								40					45			
tat	gac	aac	caa	tat	aaa	tca	taa	gag	aat	aca	act	cac	nna	aca	t at	191
		Asn														171
•	•	50		•	-,-		55		1			60	Cly		Cys	
cat	gtg	cgt	aac	ggg	aaa	cac	atq	tat	ttc	tat	tac	ttc	aat	tat	aaa	239
		Arg														
	65					70		_		_	- 75			•	•	
aaa	gcc	gaa	aag	ctt	gct	caa	gac	aaa	ctt	aaa	gcc	gaa	caa	ctc	atc	287
		Glu														
80					85					90					95	

50

55

25.	:	, -9:	,	994	9	499	acc	990	· uug	, 49	, cay	aag	ددو	, cyc	. Caa	333
Gl	y Lys	arç	; Ile	Gly	Lys	Arg	Ile	Gly	/ Lys	Arq	g Gln	Lys	Leu	Cys	Gln	
				100					105	,				110	)	
agg	g cca	agt	cgt	aca	tgg	tca	gga	gto	tgt	gga	aac	aat	aac	gca	tgc	383
															Cys	
			115					120					125		•	
aaç	aat	cag	tgc	att	aga	ctt	gag	aaa	gca	cqa	cat	qqa	tct	tac	aac	431
			Cys											_		
_		130			_		135					140		-,-		
tat	cat	ttc	cca	act	cac	aaq	tat	atc	tac	tac	ttt	cct	tat	+==		476
			Pro											caa		470
	145					150	0,70		0,0	- 1 -	155		Cys			
											100					
tag	gagci	t.c														405
5	3-3-															485
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	1> 15															
	2> PF															
			cial	Sea	uenc	6										
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	56	quen	CE													
-100	)> 43															
									_ •							
	Vai	ASN	Arg S		/al /	Ala I	Phe :	Ser .		Phe	Val :	Leu	Ile	Leu	Phe	
1				5					10					15		
Val	Leu	Ala	Ile S	er A	sp I	le A	la s	Ser '	Val :	Ser	Gly	Glu :	Leu	Cys	Glu	
			20					25					30			
Lys	Ala	Ser 1	Lys T	hr I	rp S	er G	ly P	Asn (	Cys (	Gly .	Asn 1	Chr (	Gly 1	His	Cys	
		35					40					45				
Asn	Asn (	31n (	TVS I.	ve e	ar m	-n ~	1., 0	11.7 2	1 = 7	13 - 1	u:		. 1 - 4	·		

60

Val Arg Asn Gly Lys His Met Cys Phe Cys Tyr Phe Asn Cys Lys Lys
65 70 75 80

Ala Glu Lys Leu Ala Gln Asp Lys Leu Lys Ala Glu Gln Leu Ile Gly
85 90 95

Lys Arg Ile Gly Lys Arg Ile Gly Lys Arg Gln Lys Leu Cys Gln Arg

Pro Ser Arg Thr Trp Ser Gly Val Cys Gly Asn Asn Asn Ala Cys Lys
115 120 125

Asn Gln Cys Ile Arg Leu Glu Lys Ala Arg His Gly Ser Cys Asn Tyr 130 135 140

Arg Phe Pro Ala His Lys Cys Ile Cys Tyr Phe Pro Cys
145 150 155

<210> 44

<211> 557

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic sequence

<220>

<221> CDS

<222> (3)..(548)

<400> 44

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P	he V	al 1	Leu	Ala	Ile	Ser	Asp	Ile	∍ Al	a Se	er \	/al	Ser	Gly	Glu	Le	u Cys	3
					20						25			•		3		_
																J.	•	
g	ag a	aa ç	jct .	agc	aag	acg	tgg	tcc	, gg	c aa	ic t	gt 'd	age	aac	aco	aa:	a cat	142
G.	lu L	ys A	la :	Ser	Lys	Thr	Trp	Ser	Gl	y As	n C	vs (	Glv	Asn	Thr	99°	/ His	143
				35					4				4		45	01)	nis	•
tç	jt ga	ac a	ac c	aa	tgt	aaa	tca	tgg	gad	a aa	t a	ca c	ict	cac	aa.	acc	tgt	101
																	Cys	191
			50					55			,			60	GIY	VIG	Cys	
														00				
ca	t gt	g c	gt a	ac ç	gg .	aaa	cac	ato	tat	tto	e to	1+ +	ac 1	++-	224		aaa	
															Asn			239
		5			•	•	70	-	-,-		,		y 75	ne	ASII	cys	rys	
													, ,					
aaa	a gc	c ga	a aa	ag c	tt c	ict c	aa c	ac	aaa	ctt	aa	a or	~~ ~		caa			
Lys	5 Al	a Gl	u Ly	's L	eu A	la G	ln A	asa	Lvs	Leu	Lv	- 9. - Al	a c	) a a ·	Gln :	ctc to:	get	287
80	)					85			-,-		9			, <u>1</u> u (	3111 .	Leu		
												•					95	
caa	gad	e aa	a ct	t aa	at q	cc c	aa a	ag (	ctt	gac	cai	t ma	+ ~	CC -	aag a			225
Gln	Ası	Ly	s Le	u As	sn A	la G	ln L	vs 1	Leu	Asn	Arc	- 90 - Ac	n 2	1 - 1	ys I	add	gtg	335
					00		_	, ,		105	,	,	Ъч	Ta T			vai	
										100						10		
gtt	cca	aac	gt	t ga	a ca	at co	co a:	to o	nga	aad	200	, a+.	c ~.		ag a			
Val	Pro	Ası	ı Va	1 G1	u Hi	is Pı	o T	le G	ilv	T.ve	Aro	, 21	c gu	t	ys A	gg	atc	383
			11:		_				20	Ly S	nry	, 11,	E G.			rg .	lle	
								•						1	25			•
gga	aag	ago	cad	т аа	a tt	a to	יר רב		~~ /	203	20+				gg t			
																		431
4	-4-	130		- <b>-</b> -1	- 20	~ cy	13		. G 1	FO	ser	Arc			rp S	er G	31 y	
							13	3					14	O				
atc	tat	ana	820	• د د		c ~-	<b>.</b>	<b>.</b> -										
Val	Cve	234	200	ממו	- ad	o ge	a tg	c aa	ag a	at (	cag	tgc	at	t aç	a ct	t g	ag	479
	145	сту	กรก	ASI	ı Ası			s Ly	/s A	sn (	Gln			e Ar	g Le	eu G	lu	
	7 4 D					150	ט					155						

aaa gca cga cat gga tct tgc aac tat cgt ttc cca gct cac aag tgt 527 Lys Ala Arg His Gly Ser Cys Asn Tyr Arg Phe Pro Ala His Lys Cys 160 165 170 175

atc tgc tac ttt cct tgt taa taggagctc 557

Ile Cys Tyr Phe Pro Cys

180

<210> 45

<211> 181

<212> PRT

<213> Artificial Sequence

<223> Description of Artificial Sequence: Synthetic
 sequence

<400> 45

Met Val Asn Arg Ser Val Ala Phe Ser Ala Phe Val Leu Ile Leu Phe 1 5 10 15

Val Leu Ala Ile Ser Asp Ile Ala Ser Val Ser Gly Glu Leu Cys Glu 20 25 30

Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr Gly His Cys
35 40 45

Asp Asn Gln Cys Lys Ser Trp Glu Gly Ala Ala His Gly Ala Cys His 50 .55 60

Val Arg Asn Gly Lys His Met Cys Phe Cys Tyr Phe Asn Cys Lys Lys 65 70 75 80

Ala Glu Lys Leu Ala Gln Asp Lys Leu Lys Ala Glu Gln Leu Ala Gln 85 90 95

Asp Lys Leu Asn Ala Gln Lys Leu Asp Arg Asp Ala Lys Lys Val Val
100 105 110

Pro Asn Val Glu His Pro Ile Gly Lys Arg Ile Gly Lys Arg Ile Gly
115 120 125

Lys Arg Gln Lys Leu Cys Gln Arg Pro Ser Arg Thr Trp Ser Gly Val 130 135 140

Cys Gly Asn Asn Asn Ala Cys Lys Asn Gln Cys Ile Arg Leu Glu Lys 145 150 155 160

Ala Arg His Gly Ser Cys Asn Tyr Arg Phe Pro Ala His Lys Cys Ile 165 170 175

Cys Tyr Phe Pro Cys 180

<210> 46

<211> 485

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
sequence

<220>

<221> CDS

<222> (3)..(476)

<400> 46

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Met Val Asn Arg Ser Val Ala Phe Ser Ala Phe Val Leu Ile Leu

1 5 10 15

ttc gtg ctc gcc atc tca gat atc gca tcc gtt agt gga gaa cta tgc 95 Phe Val Leu Ala Ile Ser Asp Ile Ala Ser Val Ser Gly Glu Leu Cys

ga	g aa	a go	t aç	gc aa	ag ac	g tg	g tc	g <b>g</b> g	c aa	c tg	t gg	c aa	c ac	g gg	a cat	143
Gl	u Ly	s Al	a Se	er Ly	s Th	r Tr	p Se	r Gl	y As	n Cy	s Gl	y Ası	n Th	r Gl	y His	
			3	15				4	0				4	5		
tg	t ga	c aa	с са	a to	ıt aa	a tc	a tg	g ga	g gg	t gc	g gc	t cac	gg	a gc	g tgt	191
															a Cys	
			0				5					60		•		
cat	t gt	g cg	t aa	c gg	g aaa	a cac	ato	, tgt	: tto	e tgi	t tac	: ttc	aat	: tat	gee	239
									•						a Ala	233
	65				- •	70		•		•	75			. 0,	,	
												•				
agt	act	act	gt	g gai	t cac	caa	gct	gat	gtt	act	acc	acc	aaa	act	atc	287
					, His											207
80					85			-		90			-,-		95	
															,,	
gga	aag	agg	ato	gga	aag	agg	atc	gga	aaq	agg	cao	aag	tta	tac	Caa	335
					. Lys											333
				100				4	105	9		2,2		110	GIN	
														110		
agg	cca	agt	cgt	aca	tgg	tca	gga	atc	tat	gga	aac	aat	aac	aca.	tac	383
					Trp										_	363
			115		-		2	120	-1-	1			125	nia	Cys	
													123			
aag	aat	cag	tac	att	aga	ctt	gag	aaa	gca	саа	cat	aa a	+ =+	tac	226	431
					Arg											431
•		130	•		9		135	_,_		9	1143	140	SEL	Cys	ASII	
							133					140				
tat	cta	ttc	cca	act	cac	220	tat	a+c	tac	t a 0						455
					His									caa		476
- <b>, -</b>	145			4	****	150	⊂y 5	116	Cys	TÄL		rro (	cys			
						<b></b>					155					
taic	aac+	_														
tagg	agec	C														485

<210> 47

<211> 157

<212> PRT

<213> Artificial Sequence

<223> Description of Artificial Sequence: Synthetic sequence

<400> 47

Met Val Asn Arg Ser Val Ala Phe Ser Ala Phe Val Leu Ile Leu Phe 1 5 10 15

Val Leu Ala Ile Ser Asp Ile Ala Ser Val Ser Gly Glu Leu Cys Glu 20 25 30

Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr Gly His Cys
35 40 45

Asp Asn Gln Cys Lys Ser Trp Glu Gly Ala Ala His Gly Ala Cys His 50 55 60

Val Arg Asn Gly Lys His Met Cys Phe Cys Tyr Phe Asn Cys Ala Ser 65 70 75 80

Thr Thr Val Asp His Gln Ala Asp Val Ala Ala Thr Lys Thr Ile Gly
85 90 95

Lys Arg Ile Gly Lys Arg Ile Gly Lys Arg Gln Lys Leu Cys Gln Arg 100 105 110

Pro Ser Arg Thr Trp Ser Gly Val Cys Gly Asn Asn Asn Ala Cys Lys
115 120 125

Asn Gln Cys Ile Arg Leu Glu Lys Ala Arg His Gly Ser Cys Asn Tyr 130 135 140

Leu Phe Pro Ala His Lys Cys Ile Cys Tyr Phe Pro Cys 145 150 155

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		sequ	ence	•												
	20>															
	21>			_												
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	20.	4.0														•
_	00> ·		+		<b>.</b>											
CC					tcg											. 47
	1	V 0 1	VSII	ALG	Ser 5	vai	Ala	Pne	Ser		Phe	Val	Leu	Ile		
	•				5					10					15	
tto	ato	r ct	c ace	= ato	e tca	a gat	- ato		a + c			- ~~				0.5
					e Ser											
				20					25		. Jei	. 613	, 610	30		i
														50	,	
gag	aaa	gct	ago	aag	, acg	, tgg	tcg	gge	aac	tqt	gad	aac	aco	gga	cat	143
					Thr											
			35					40					45			
tgt	gac	aac	caa	tgt	aaa	tca	tgg	gag	ggt	gcg	gct	cac	gga	gcg	tgt	191
					Lys											
		50					55					60				
cat	gtg	cgt	aac	999	aaa	cac	atg	tgt	ttc	tgt	tac	ttc	aat	tgt	tcc	239
His	Val	Arg	Asn	Gly	Lys	His	Met	Cys	Phe	Cys	Tyr	Phe	Asn	Cys	Ser	
	65					70					75					
					gtg											287
	Ala	Ala	Asp	Glu	Val	Ala	Thr	Gln	Leu	Leu	Asn	Phe	Asp	Leu	Leu	
80					85					90					95	

WO 00/11175 PCT/GB99/02716

									49							(GB)),
aag	ctt	gcg	gga	gac	gtc	gag	tcc	aac	cct	999	ccc	cag	aag	ttg	tgc	335
Lys	Leu	Ala	Gly	Asp	Val	Glu	Ser	Asn	Pro	Gly	Pro	Gln	Lys	Leu	Cys	
				100					105					110		
caa	agg	сса	agt	cgt	aca	tgg	tca	gga	gtc	tgt	gga	aac	aat	aac	gca	383
		Pro													_	
			115					120					125			
tac	aan	aat	cag	tac	att	aga	ctt	nan	222	aca	caa	cat	aa.	t ct	tac	431
																431
Cys	Lys	Asn	GIn	Cys	He	Arg	Leu	Glu	Lys	Ala	Arg	His	Gly	Ser	Cys	
		130					135					140				
																•
aac	tat	cgt	ttc	cca	gct	cac	aag	tgt	atc	tgc	tac	ttt	cct	tgt	taa	479
Asn	Tyr	Arg	Phe	Pro	Ala	His	Lys	Cys	Ile	Cys	Tyr	Phe	Pro	Cys		
	145					150					155					
tago	agct	c														488

<210> 49

<211> 158

<212> PRT

<213> Artificial Sequence

<223> Description of Artificial Sequence: Synthetic sequence

<400> 49

Met Val Asn Arg Ser Val Ala Phe Ser Ala Phe Val Leu Ile Leu Phe

1 5 10 15

Val Leu Ala Ile Ser Asp Ile Ala Ser Val Ser Gly Glu Leu Cys Glu 20 25 30

Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr Gly His Cys
35 40 45

Asp Asn Gln Cys Lys Ser Trp Glu Gly Ala Ala His Gly Ala Cys His
50 55 60

Val Arg Asn Gly Lys His Met Cys Phe Cys Tyr Phe Asn Cys Ser Asn 65 70 75 80

Ala Ala Asp Glu Val Ala Thr Gln Leu Leu Asn Phe Asp Leu Leu Lys
85 90 95

Leu Ala Gly Asp Val Glu Ser Asn Pro Gly Pro Gln Lys Leu Cys Gln
100 105 110

Arg Pro Ser Arg Thr Trp Ser Gly Val Cys Gly Asn Asn Asn Ala Cys
115 120 125

Lys Asn Gln Cys Ile Arg Leu Glu Lys Ala Arg His Gly Ser Cys Asn 130 135 140

Tyr Arg Phe Pro Ala His Lys Cys Ile Cys Tyr Phe Pro Cys 145 150 155

<210> 50

<211> 575

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic sequence

<220>

<221> CDS

<222> (3)..(566)

<400> 50

cc atg gtg aat cgg tcg gtt gcg ttc tcc gcg ttc gtt ctg atc ctt 47

Met Val Asn Arg Ser Val Ala Phe Ser Ala Phe Val Leu Ile Leu

1 5 10 15

ttc gtg ctc gcc atc tca gat atc gca tcc gtt agt gga gaa cta tgc 95  Phe Val Leu Ala Ile Ser Asp Ile Ala Ser Val Ser Gly Glu Leu Cys  20 25 30
gag aaa gct agc aag acg tgg tcg ggc aac tgt ggc aac acg gga cat 143 Glu Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr Gly His 35 40 45
tgt gac aac caa tgt aaa tca tgg gag ggt gcg gct cac gga gcg tgt 191 Cys Asp Asn Gln Cys Lys Ser Trp Glu Gly Ala Ala His Gly Ala Cys 50 55 60
cat gtg cgt aac ggg aaa cac atg tgt ttc tgt tac ttc aat tgt tcc 239  His Val Arg Asn Gly Lys His Met Cys Phe Cys Tyr Phe Asn Cys Ser  65 70 75
aac gcg gcc gac gag gtg gct acc cag ctg ttg aat ttt gac ctt ctt 287 Asn Ala Ala Asp Glu Val Ala Thr Gln Leu Leu Asn Phe Asp Leu Leu 80 85 90 95
aag ctt gcg gga gac gtc gag tcc aac cct ggg ccc atg gct aag ttt 335 Lys Leu Ala Gly Asp Val Glu Ser Asn Pro Gly Pro Met Ala Lys Phe 100 105 110
gcg tcc atc atc gca ctt ctt ttt gct gct ctt gtt ctt ttt gct gc
Phe Glu Ala Pro Thr Met Val Glu Ala Gln Lys Leu Cys Gln Arg Pro  130 135 140
agt cgt aca tgg tca gga gtc tgt gga aac aat aac gca tgc aag aat 479  Ser Arg Thr Trp Ser Gly Val Cys Gly Asn Asn Asn Ala Cys Lys Asn  145  150  155

cag tgc att aga ctt gag aaa gca cga cat gga tct tgc aac tat cgt 527 Gln Cys Ile Arg Leu Glu Lys Ala Arg His Gly Ser Cys Asn Tyr Arg 160 165 170 175

ttc cca gct cac aag tgt atc tgc tac ttt cct tgt taa taggagctc 575
Phe Pro Ala His Lys Cys Ile Cys Tyr Phe Pro Cys
180 185

<210> 51

<211> 187

<212> PRT

<213> Artificial Sequence

<223> Description of Artificial Sequence: Synthetic sequence

<400> 51

Met Val Asn Arg Ser Val Ala Phe Ser Ala Phe Val Leu Ile Leu Phe 1 5 10 15

Val Leu Ala Ile Ser Asp Ile Ala Ser Val Ser Gly Glu Leu Cys Glu
20 25 30

Lys Ala Ser Lys Thr Trp Ser Gly Asn Cys Gly Asn Thr Gly His Cys
35 40 45

Asp Asn Gln Cys Lys Ser Trp Glu Gly Ala Ala His Gly Ala Cys His
50 55 60

Val Arg Asn Gly Lys His Met Cys Phe Cys Tyr Phe Asn Cys Ser Asn 65 70 75 80

Ala Ala Asp Glu Val Ala Thr Gln Leu Leu Asn Phe Asp Leu Leu Lys
85 90 95

Leu Ala Gly Asp Val Glu Ser Asn Pro Gly Pro Met Ala Lys Phe Ala 100 105 110

Ser	Ile	Ile	Ala	Leu	Leu	Phe	Ala	Ala	Leu	Val	Leu	Phe	Ala	Ala	Phe
		115					120					125			

Glu Ala Pro Thr Met Val Glu Ala Gln Lys Leu Cys Gln Arg Pro Ser 130 135 140

Cys Ile Arg Leu Glu Lys Ala Arg His Gly Ser Cys Asn Tyr Arg Phe 165 170 175

Pro Ala His Lys Cys Ile Cys Tyr Phe Pro Cys 180 185

<210> 52

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<221> misc\_feature

<222> (9, 12, 15)

<223> n is any residue

<220>

<223> Description of Artificial Sequence: Oligonucleotide

<400> 52

carttraant ancanaaarc acat

```
<210> 53
<211> 8
<212> PRT
<213> Dahlia merckii
<400> 53
Met Cys Phe Cys Tyr Phe Asn Cys
```

<210> 54 <211> 20 <212> DNA <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Oligonucleotide <400> 54

aaacacatgt gtttcccatt

<210> 55 <211> 19 <212> DNA <213> Artificial Sequence <220>

<400> 55 agcgtgtcat gtgcgtaat

<223> Description of Artificial Sequence: Oligonucleotide

19

20

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<210> 56
 <211> 23
 <212> DNA
 <213> Artificial Sequence
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 <223> Description of Artificial Sequence:
       Oligonucleotide
 <400> 56
 taaagaaacc gaccctttca cgg
                                                                    23
 <210> 57
<211> 107
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 57
atgcatccat ggtgaatcgg tcggttgcgt tctccgcgtt cgttctgatc cttttcgtgc 60
togocatoto agatatogoa toogttagtg gagaactatg cgagaaa
<210> 58
<211> 37
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 58
aaaccgaccg agctcacgga tgttcaacgt ttggaac
                                                                   37
```

<210> 59	
<211> 34	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Description of Artificial Sequence: Primer	
<400> 59	
agcaagcttt tcgggagctc aacaattgaa gtaa	34
<210> 60	
<211> 89	
<212> DNA	
<213> Artificial Sequence	
4220	
<220>	
<223> Description of Artificial Sequence: Primer	
<400> 60	
gcctttggca caacttctgt cctggctcca cgtcctctgg ggtagccacc tcgtcagcag	60
cgttggaaca attgaagtaa cagaaacac	89
<210> 61	
<211> 29	
<212> DNA	
<213> Artificial Sequence	
<220>	
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<400> 61	
ttagagetee tattaacaag gaaagtage	29

<210> 62	
<211> 55	
<212> DNA	
<213> Artificial Sequence	
<220>	
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<400> 62	
gcctttggca caacttctgc ctctttccga tgagttgttc ggctttaagt ttgtc	55
i i i i i i i i i i i i i i i i i i i	7,7
<210> 63	
<211> 53	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Description of Artificial Sequence: Primer	
<400> 63	
gcctttggca caacttctgc ctctttccga tcggatgttc aacgtttgga acc	53
<210> 64	
<211> 101	
<212> DNA	
<213> Artificial Sequence	•
<220>	
223> Description of Artificial Sequence: Primer	
×400> 64	
cctttggca caacttctgc ctctttccga tagttttggt ggcagcaaca tcagcttggt	60
atccacagt agtactggca caattgaagt aacagaaaca c	101

23

<212> PRT

<213> Artificial Sequence

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<210> 65
  <211> 4
  <212> PRT
  <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: Synthetic
        sequence
 <400> 65
 Lys Asp Glu Leu
   1
<210> 66
<211> 23
<212> DNA
<213> Artificial Sequence
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<221> misc_feature
<222> (9, 12, 21)
<223> n is any residue
<220>
<223> Description of Artificial Sequence:
      Oligonucleotide
<400> 66
atggcsaanm rntcrgttgc ntt
<210> 67
<211> 4
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1

<400> 68

1

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<220>
<223> Description of Artificial Sequence: Synthetic sequence
<400> 67
Ile Gly Lys Arg
```

<210> 68
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer

aggaagttca tttcatttgg 20

<210> 69
<211> 7
<212> PRT
<213> Artificial Sequence
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<223> Description of Artificial Sequence: Determined
 N-terminal sequence
<400> 69
Glu Leu Cys Glu Lys Ala Ser

```
<210> 70
 <211> 7
 <212> PRT
 <213> Artificial Sequence
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 <223> Description of Artificial Sequence: Determined
       N-terminal sequence
 <400> 70
 Asp Val Glu Pro Gly Gln Lys
                   5
<210> 71
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Determined
      N-terminal sequence
<400> 71
Leu Ile Gly Lys Arg Gln Lys
  1
<210> 72
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Predicted
```

C-terminal sequence

```
<400> 72
Cys Tyr Phe Asn Cys Ser
1 5
```

<210> 73
<211> 6
<212> PRT
<213> Artificial Sequence
<220>

<223> Description of Artificial Sequence: Predicted C-terminal sequence

<400> 73 Ile Cys Tyr Phe Pro Cys 1 5

<210> 74
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Predicted

C-terminal sequence

<400> 74 Cys Tyr Phe Asn Pro Ser 1 5

```
<210> 75
 <211> 6
 <212> PRT
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 <223> Description of Artificial Sequence: Predicted
       C-terminal sequence
 <400> 75
 Cys Tyr Phe Asn Cys Lys
   1
                   5
<210> 76
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Predicted
      C-terminal sequence
<400> 76
Cys Tyr Phe Asn Cys Ala
  1
                   5
<210> 77
<211> 12
<212> PRT
<213> Artificial Sequence
<220>
```

<223> Description of Artificial Sequence: Synthetic

sequence

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<400> 77
Ile Gly Lys Arg Ile Gly Lys Arg Ile Gly Lys Arg
1 5 10
```

```
<210> 78

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic sequence

<400> 78

Val Ser Gly Glu Leu Cys

1 5
```

<210> 79
<211> 22
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic

Glu Pro Gly Gln Lys Leu

sequence

<210> 80 <211> 26 <212> PRT <213> Artificial Sequence <220> sequence <400> 80

<223> Description of Artificial Sequence: Synthetic

Phe Asn Cys Lys Lys Ala Glu Lys Leu Ala Gln Asp Lys Leu Lys Ala

1 10 15

Glu Gln Leu Ile Gly Lys Arg Gln Lys Leu

<210> 81

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic sequence

<400> 81

Phe Asn Cys Ala Ser Thr Thr Val Asp His Gln Ala Asp Val Ala Ala

1

5

10

15

Thr Lys Thr Ile Gly Lys Arg Gln Lys Leu